1	2	3	4
Dadra & Nagar Haveli	0	0	0
Daman & Diu	0	0	0
Goa	67.57	210.16	319.68
Gujarat	10859.14	12296.86	15288.57
Haryana	5337.22	5764.42	6906.6
Himachal Pradesh	2996.13	3105.94	4141.57
Jammu & Kashmir	1582.09	1909.65	2165.3
Karnataka	7493.74	7656.57	10399.67
Kerala	5587.14	6980.6	7132.74
Lakshadweep	0	16.97	0
Madhya Pradesh*	5457.21	6516.1	5648.98
Maharashtra	13822.66	15770.35	19989.84
Manipur	43.87	155.52	115.45
Meghalaya	58.07	85.18	85.62
Mizoram	4.37	0	14.66
Nagaland	0	8.46	8.51
Orissa	2943.72	2757.44	3255.52
Pondicherry	88.5	35.02	90.18
Punjab	5768.27	6274.55	7328.11
Rajasthan	2149.27	2414.39	2737.51
Sikkim	5	86.34	325.06
Tamil Nadu	7559.33	8410.24	10805.22
Tripura	23.27	42.02	28.28
Uttar Pradesh*	10596.71	11569.59	12271.33
West Bengal	5375.11	4035.87	4651.48
TOTAL	104155.5	114532.2	137638.2

Note : * Bihar, Madhya Pradesh and Uttar Pradesh includes Jharkhand, Chhattisgarh & Uttaranchal respectively.

Development of Fuel Cell Energy Sources

5243. SHRI SHANKAR ROY CHOWDHURY : Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state :

(a) whether the research into development of fuel cell energy sources is being conducted in any of the National Laboratories of the CSIR to develop alternatives for hydrocarbon fuels for motor transport;

(b) if so, the institutions where such research is being conducted, and funds allotted for this purpose;

(c) the progress achieved and present position of such researches; and

(d) if not, the reasons why such research is not being conducted?

THE MINISTER OF STATE IN THE DEPARTMENT OF SCIENCE AND TECHNOLOGY IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT) : (a) to (c) Several CSIR laboratories, *viz.*, Indian Institute of Chemical Technology (IICT), Central Electrochemical Research Institute (CECRI), Central Glass & Ceramic Research Institute (CGCRI) and National Chemical Laboratory (NCL) have been carrying out work on diverse aspects of R &D on fuel cells for motor transport and stationary applications.

IICT has developed a stand alone version of methanol based fuel cell. CECRI has demonstrated the operation of the polymer electrolyte membrane fuel cell using platinised carbon electrodes with hydrogen and air at ambient temperature and pressure. CGCRI has developed components like electrolyte, cathode and anode for solid oxide fuel cell. NCL has developed a series of catalysts for reforming liquid feed stocks such as LPG and methanol as well as fuel cell stack for proton exchange membrane fuel cell. These laboratories have been allocated funds to the tune of Rs. 279 lakh for the fuel cell programmes.

(d) Does not arise.

Mineral Exploration by NMDC and IRE Ltd.

5244. SHRI V. V. RAGHAVAN : Will the Minister of STEEL be pleased to state :

(a) when will the joint mineral exploration by the National Mineral Development Corporation Limited (NMDC) and Indian Rare Earths Ltd. will start and what will be the investment;

(b) what are the minerals which will be explored and the area from which exploration will be made; and

(c) whether there is any scheme to produce value added products and if so, what are they?

THE MINISTER OF STATE OF THE MINISTRY OF STEEL (SHRI BRAJ KISHORE TRIPATHY) : (a) No joint mineral exploration by National Mineral Development Corporation Limited (NMDC) and Indian Rare Earths Ltd. (IREL) is envisaged.

(b) Does not arise, in view of (a) above.

(c) Yes, Sir, NMDC and IREL plan to jointly produce value added products. In the first phase, there is a scheme for setting up of a value addition plant *viz.* synthetic rutile plant based on the ilmenite produced by Indian Rare Earths